

# OUTDOOR WINTER PENTATHLON

**Test your flexibility, jumping, speed, agility and strength**

A **pentathlon** is an athletic competition that has five distinct events. The word "pentathlon" comes from the Greek root words *pente* (meaning "five") and *athlon* (meaning "contest"). The pentathlon in the ancient Greek Olympics consisted of jumping, spear-throwing, discus, running and wrestling. The modern pentathlon, introduced at the 1912 Stockholm Olympic Games, includes swimming, pistol-shooting, fencing, horse riding and running.

## **What you'll need:**

- Measuring tape
- Scale
- Calculator
- Timing device (stopwatch, phone app)
- Heavy shovel
- Some snow (or chalk, if snow is not available)
- A stick or skipping rope
- Competitors

## **Get warm—and stay warm!**

Prepare for your pentathlon by following these important steps:

- Dress in warm clothes that dry quickly.
- Wear layers, starting with a thin water-repellant base layer and an outer layer that keeps out the wind and water.
- Protect your head, ears, hands and feet from the cold.
- Wear sunscreen to protect your exposed skin.
- Do warm-up exercises before you start, like jumping jacks, pushups and stretches.
- Stay hydrated by drinking lots of fluids before, during and after the pentathlon.
- Before you get started, check the ground for ice to make sure you don't slip.
- Remove any dangerous obstacles from your event grounds.

Note: These events are intended for all ages, but sometimes a competitor doesn't feel comfortable competing—and that's okay. Only compete in an event if you feel up to it.



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# FLEXIBILITY

## Test the stretchiness of your body

### Activity setup:

1. Sit on the ground with your legs straight out in front of you.
2. Lean forward as far as you can, stretching your hands out towards—and, if possible, past—the soles of your boots. Do not bend your legs.
3. Have a competitor use the measuring tape to measure the distance between your fingertips and your boot soles. How far past your soles can your gloved fingers reach? If they can't reach as far as your soles, the distance is a negative number.
4. The person with the highest number—whose fingers reached the farthest—is the winner.

### Consider this!

After you've finished this event, rank the competitors in order from least flexible to most flexible. Notice any trends? Flexibility relies on the stretchiness of your ligaments (which connect bones to bones) and tendons (which connect muscles to bones) plus the ability of your muscles to relax. After puberty, you begin to lose flexibility. Also, there is some evidence that females, on average, are more flexible than males. But stretching regularly also helps: inactivity can make your ligaments and tendons become stiff.



# VERTICAL JUMP



## Test the explosive power of your legs

### Activity setup:

1. Using the scale, weigh yourself in your snowsuit before you start the competition.
2. Put some snow on your gloved fingertip and mark how high you can reach up the wall while standing. If there's no snow, use chalk.
3. Take another small chunk of snow on your gloved fingertip. Jump as high as you can and touch the wall with the snow when you are at your highest.
4. To calculate your result, take the difference between the height you reached by jumping and the height you reached just by reaching, in centimetres, and divide it by your weight, in kilograms.

*Maximum height reached when jumping -  
Maximum height reached while standing =  
Height jumped*

*Height jumped ÷ Competitor's weight = Result*

5. The person with the highest result wins.

Note: If all the competitors are a similar size and age, the total height jumped could be used as the final result. In that case, the winner is the person who jumped the highest.

### Did you know?

Explosive power isn't just important for sports like basketball. It is important for any sport where you need to move suddenly and quickly, such as hockey or bobsled or gymnastics. Jumping uses the muscles in your legs, bum, stomach, back and arms. If you didn't use your arms to help you in the vertical jump, try again, this time swinging your arms upward. Did your result change?



# SPEED

## Test how fast you can run on the spot

### Activity setup:

1. Set your timer for 15 seconds, then run on the spot as fast as you can. Ask another competitor to count every time one of your boots hits the ground.
2. The person who logs the greatest number of steps in 15 seconds is the winner.

### Did you know?

Running on the spot is a little different from running in a field or on a track, where you have to use more upper body and leg muscles to propel yourself forward. In a short-distance race, if you want to run faster, you need to push off the ground with more force. The harder you push, the farther you will go. First-class sprinters cover more distance with each push than slower runners. The record for the 100-metre race is currently 9.58 seconds, set by Usain Bolt in the 2009 Berlin World Championships in Athletics, and it was achieved with about 41 strides—while some of his competitors took over 45.



# AGILITY



## Test your ability to change direction and position

### Activity setup:

1. Using a stick, draw a hexagon in the snow, with six sides of about 60 cm each. (If you're a younger, smaller competitor, make the sides 40 cm.)
2. Stand in the centre of the hexagon facing one assigned direction, which we will call forward. You will only ever face forward throughout this event.
3. When the person with the timer says Go, jump as fast as you can across the line in front of you, out of the hexagon, and then jump backwards into the hexagon again.
4. Still facing forward, jump to the right over the side of the hexagon, then jump sideways back into the centre. Keep going around the hexagon until you have jumped over all six sides and returned each time to the centre.
5. Do it twice—once going clockwise and once going counterclockwise. The difference between your two times is your result time.

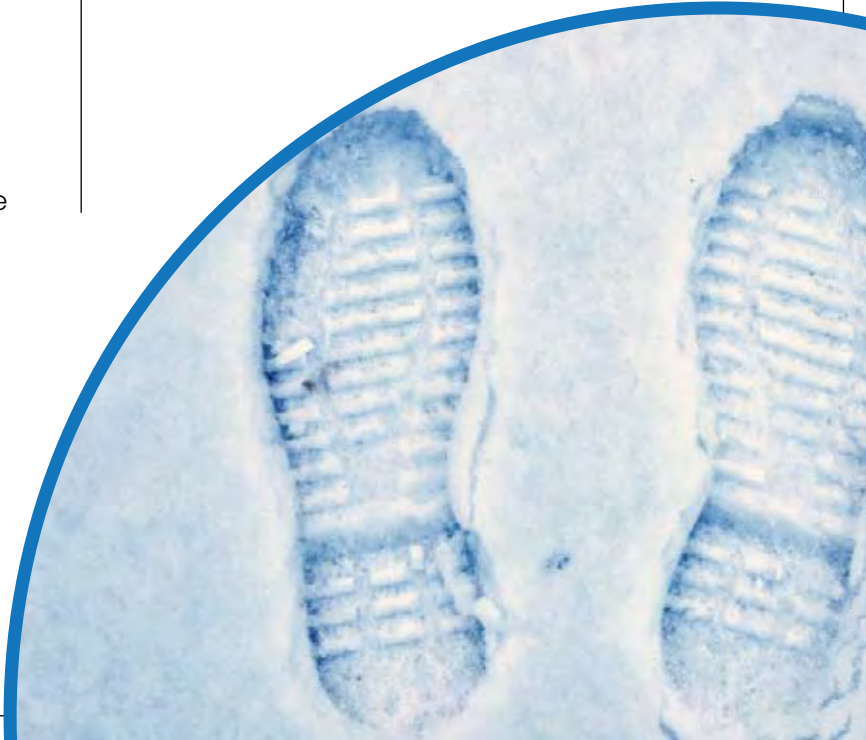
*Longer time - Shorter time = Result time*

6. The winner is the person with the smallest result time.

It may be worth practising a few times before you start timing. If possible, create a new hexagon in the snow for each person. (If there's no snow, use chalk or a skipping rope to make the hexagon.)

### Did you know?

Agility is a combination of speed, balance, coordination and strength. In this activity, you are comparing your agility in one direction with your agility in the other. Most people have a dominant direction. By comparing your clockwise and counterclockwise times, you will discover yours. The shorter the time between the two directions, the better you are able to change direction both left and right, making you a better all-round athlete.



# STRENGTH

## Test your upper body might

### Activity setup:

1. Mount the measuring tape or take turns holding it while everyone competes.
2. Place the shovel on the ground with the blade end towards the measuring tape.
3. Lift the shovel with both hands by gripping only the handle. Raise the blade of the shovel as high as you can up the measuring tape.
4. Record the maximum height you could lift the blade. Divide that number by your height. The number you get is your result.

*Height the shovel is lifted  $\div$  Your height = Result*

5. The winner has the highest result number.

Note: If everyone is of a similar size and age, the height lifted can be used as the result. The winner is the person who lifted the shovel the highest.

### Consider this!

In this event, you have become part of a third-class lever: the "load" is the shovel, the "force" is the effort you put into raising it upwards and the fulcrum (or "pivot point") is your shoulders. What a machine you are!

